

Granulomatous Inflammation within a Uterine Leiomyoma

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Background

Uterine leiomyomas are the most common pelvic neoplasm in females¹. A granuloma is a region of compact inflammatory cells, often containing multinucleated giant cells which are formed from the fusion of monocytes². Granulomas have been reported in a variety of pathologic conditions but are a rare finding in uterine leiomyoma histopathology. Granuloma formation can be focal or systemic and is characterised by a compact area of inflammatory cells seen under microscopy. It is associated with a variety of infectious and non-infectious conditions.

Case report

A 43-year-old para two female presented to the gynaecology clinic with severe abdominal pain and persistent dysmenorrhoea secondary to endometriosis on a background of laparoscopic left salpingo-oophorectomy in 2022 and a history of multiple laparoscopies for endometriosis.

A CT demonstrated moderate complex free fluid suggestive of a ruptured cyst and an ultrasound confirmed a 59x63x54mm large fundal intramural fibroid. The patient was discharged for conservative management of her uncomplicated ruptured functional ovarian cyst.

After follow-up for recurrent acute cyst events and dysmenorrhoea, the patient opted for surgical management via total laparoscopic hysterectomy. Histological examination of the bicornuate bulky uterus demonstrated an intramural leiomyoma with scattered foci of non-necrotising granulomatous inflammation with some granulomas appearing close to small blood vessels. Stains for tuberculosis and mycoplasma were negative. The patient recovered post-operatively with input from the acute pain service.

Discussion

Granulomatous inflammation poses a potential diagnostic dilemma for clinicians. Histopathological investigation of surgical specimens may be the first finding of systemic disease. While uncommon, clinicians should consider systemic granulomatous disorders including vasculitis or sarcoidosis to ensure adequate diagnosis and treatment. A potential differential diagnosis is idiopathic uterine granuloma, characterised by granulomas found near thin-walled vascular channels in the absence of vasculitis³. However, incidental granulomatous inflammation has previously been associated with prior instrumentation of the uterus⁴, which is the most likely cause in this case.

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